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3	25	domain) ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:22
4	15	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria or lepidoptera) and (LBD or	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:37
5	15	ligand adj binding adj domain) and hinge ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria or lepidoptera) and (LBD or ligand adj binding adj domain) and hinge and chimeric	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:37
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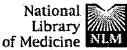
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Page 1 of 1 Entrez-PubMed







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Nucleotide Protein Genome

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for locusta ecdysone receptor ligand binding domain h Limits Preview/Index History

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- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.

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ClinicalTrials.gov PubMed Central	#4	Search ecdysone receptor ligand binding domain hinge region ostrinia nubilalis chimeric	10:19:11	<u>0</u>
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=> s ecdysone (A) receptor (5A) chimeric

L1 20 ECDYSONE (A) RECEPTOR (5A) CHIMERIC

=> s l1 and hinge

L2 2 L1 AND HINGE

=> d ibib abs 1-2

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing Text References

ACCESSION NUMBER: 2003:633352 CAPLUS

DOCUMENT NUMBER: 139:174841

TITLE: Control of gene expression in transgenic plants using

chimeric insect ecdysone receptors and receptor

cassettes

INVENTOR(S): Pascal, Erica J.; Valentine, Scott A.; Brown, Jeffrey

A.; Cockrell, Adam S.; Johnson, Brian D.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 186 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

US 2003154509 A1 20030814 US 2001-87167 20011024

PRIORITY APPLN. INFO.: US 2001-87167 20011024

Chimeric insect hormone receptors and receptor cassettes are provided as AB well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a hinge region (H), a ligand binding domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect ecdysone receptors. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding chimeric ecdysone receptors (EcRs) contg. domains from Manduca sexta, Agrotis ipsilon, Spodoptera frugiperda, Chironomus tentans, Locusta migratoria, Ostrinia nubilalis, and Drosophila melanogaster were prepd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
Text References
ACCESSION NUMBER:

2002:595026 CAPLUS

DOCUMENT NUMBER: 137:164639

TITLE: Chimeric ecdysone receptors and genes encoding

them for control of gene expression in plants

INVENTOR(S): Pascal, Erica Judith; Valentine, Scott Arthur; Brown,

Jeffrey Arthur; Cockrell, Adam Scott; Johnson, Brian

David

PATENT ASSIGNEE(S): Syngenta Participations Ag, Switz.

SOURCE: PCT Int. Appl., 319 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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WO 2002	WO 2002061102			20020808 WO 2001-US51417 200					2001	11024					
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PRIORITY API	PRIORITY APPLN. INFO.: <u>US_2000-242969PP20001024</u>														
						1	WO 2	001-	US51	417	W	2001	1024		

AB Chimeric insect hormone receptors and receptor cassettes are provided as well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a hinge region (H), a ligand binding domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect ecdysone receptors. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding chimeric ecdysone receptors contg. domains from Manduca sexta, Agrotis ipsilon, Spodoptera frugiperda, Chironomus tentans, Locusta migratoria, Ostrinia nubilalis, and Drosophila melanogaster were prepd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

=> s hinge (S) ligand (A) binding and ecdysone (A) receptor
L3 8 HINGE (S) LIGAND (A) BINDING AND ECDYSONE (A) RECEPTOR

=> d ibib abs 1-3

L3 ANSWER 1 OF 8 MEDLINE on STN

Full Claine Text Refrances

ACCESSION NUMBER: 1999348185 MEDLINE

DOCUMENT NUMBER: 99348185 PubMed ID: 10417731

TITLE: Ecdysone agonist inducible transcription in transgenic

tobacco plants.

AUTHOR: Martinez A; Sparks C; Hart C A; Thompson J; Jepson I CORPORATE SOURCE: ZENECA Agrochemicals, Jealott's Hill Research Stsation,

Bracknell, Berkshire, UK.. Alberto.Martinez@AGUK.Zeneca.com

SOURCE: PLANT JOURNAL, (1999 Jul) 19 (1) 97-106.

Journal code: 9207397. ISSN: 0960-7412.

PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals OTHER SOURCE: GENBANK-Y09009

ENTRY MONTH: 199910

ENTRY DATE: Entered STN: 19991014

Last Updated on STN: 19991014 Entered Medline: 19991005

AB A novel chemical-induced gene regulatory system for plants consisting of two molecular components is described. The first, or regulatory, cassette comprises a chimeric receptor composed of the hinge and ligand binding domains of the Heliothis virescens ecdysone receptor and the transactivation domain of the Herpes simplex VP16 protein fused to the DNA binding domain and transactivation of a mammalian glucocorticoid receptor. The second component, a reporter cassette, contains six copies of the glucocorticoid response element (GRE) fused to the minimal 35SCaMV promoter and beta-glucuronidase. The system uses a commercially available non-steroidal ecdysone agonist, RH5992 (tebufenozide), as an inducer. Activation of gene expression is shown in both tobacco transient protoplasts and transgenic plants. The response is ligand dependent and is modulated by the change in minimal promoter context. The system is capable of inducing transgene activity up to 420-fold corresponding to 150% of the activity observed with positive controls (35SCaMV:GUS).

L3 ANSWER 2 OF 8 MEDLINE on STN

Full Signer Text References

ACCESSION NUMBER: 96191152 MEDLINE

DOCUMENT NUMBER: 96191152 PubMed ID: 8641050

TITLE: Cloning and developmental expression of the ecdysone

receptor gene from the spruce budworm, Choristoneura

fumiferana.

AUTHOR: Kothapalli R; Palli S R; Ladd T R; Sohi S S; Cress D;

Dhadialla T S; Tzertzinis G; Retnakaran A

CORPORATE SOURCE: Canadian Forest Service--Saulte St. Marie, Ontario, Canada.

SOURCE: DEVELOPMENTAL GENETICS, (1995) 17 (4) 319-30.

Journal code: 7909963. ISSN: 0192-253X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals OTHER SOURCE: GENBANK-U29531

ENTRY MONTH: 199607

ENTRY DATE: Entered STN: 19960726

Last Updated on STN: 19960726 Entered Medline: 19960716

AB Degenerate oligonucleotides were designed on the basis of conserved amino acid sequences in the DNA and ligand-binding regions of the members of the steroid hormone receptor superfamily. Using these oligonucleotides in RNA-PCR, a cDNA fragment was isolated from the spruce budworm, Choristoneura fumiferana. Comparison of the deduced amino acid sequence of this cDNA fragment with the members of the steroid hormone receptor superfamily suggested that this PCR fragment is a region of the ecdysone receptor from C. fumiferana. Using this cDNA fragment as a probe, 10 clones were isolated from a cDNA library that was constructed using the RNA from 4- and 5-day old embryos of C. fumiferana. Two cDNA clones (1.3)

and 3 kb) that overlap and show amino acid identity with Drosophila melanogaster ecdysone receptor B-1 isoform (DmEcR) were characterized and sequenced. The longest open reading frame had 539 codons and covered the complete EcR coding region. The deduced amino acid sequence of this open reading frame had all five of the regions typical for a steroid hormone nuclear receptor. The C domain or DNA binding region showed the highest identity wit EcR proteins from D. melanogaster, Chironomus tendons, Aedes aegypti, Manduca sexta, and Bombyx mori. The A/B region, D domain or hinge region, E domain, or ligand binding region also showed significant amino acid similarity with the EcR proteins from the five insects mentioned above. The C. fumiferana ecdysteroid receptor (CfEcR) cDNA probe detected a 6.0-kb mRNA that was present throughout the development of C. fumiferana. The CfEcR mRNA increases in abundance at the time of the ecdysteroid peak during the molting phase in the embryonic, larval and pupal stages but remains low during the intermolt period. In the 6th instar larvae, the 6-kb CfEcR mRNA was detected in the epidermis, fat body, and midgut and maximum expression was observed during the prepupal peak of ecdysteroids in the hemolymph. CfEcR mRNA was induced in ecdysone treated CF-203 cells as well in the epidermis and midgut of larvae that were fed the nonsteroidal ecdysteroid agonist, RH-5992. The induction occurred within an hour and reached maximum levels around 3 hr, after which it decreased to the basal level by 6 hr. In vitro transcription and translation of the CfEcR cDNA yielded a 67-Kda protein that bound to the ecdysone response element (EcRE) as a heterodimer, along with the ultraspiracle protein.

L3 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing Text References

ACCESSION NUMBER: 2003:633352 CAPLUS

DOCUMENT NUMBER: 139:174841

TITLE: Control of gene expression in transgenic plants using

chimeric insect ecdysone receptors and receptor

cassettes

INVENTOR(S): Pascal, Erica J.; Valentine, Scott A.; Brown, Jeffrey

A.; Cockrell, Adam S.; Johnson, Brian D.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 186 pp.

Patent

CODEN: USXXCO

DOCUMENT TYPE:

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

US 2003154509 A1 20030814 US 2001-87167 20011024

PRIORITY APPLN. INFO.: US 2001-87167 20011024

AB Chimeric insect hormone receptors and receptor cassettes are provided as well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a hinge region (H), a ligand binding domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect ecdysone receptors. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding chimeric

ecdysone receptors (EcRs) contg. domains from Manduca sexta, Agrotis ipsilon, Spodoptera frugiperda, Chironomus tentans, Locusta migratoria, Ostrinia nubilalis, and Drosophila melanogaster were prepd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

=> d 4-8

ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

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  Text
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    137:164639
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ΤI
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IN
    Cockrell, Adam Scott; Johnson, Brian David
    Syngenta Participations Ag, Switz.
PΑ
    PCT Int. Appl., 319 pp.
SO
    CODEN: PIXXD2
DT
    Patent
LΑ
    English
FAN.CNT 1
    PATENT NO.
                    KIND DATE
                                         APPLICATION NO. DATE
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                                          WO 2001-US51417 20011024
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                           20020808
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    WO 2002061102
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                           20030821
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            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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                     A2 20031029
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            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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- PBBlackwell Science Ltd.
- DTJournal
- LA English
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L3 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

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- TI Cloning and developmental expression of the **ecdysone receptor** gene from the spruce budworm, Choristoneura fumiferana
- AU Kothapalli, Ravi; Palli, Subba R.; Ladd, Tim R.; Sohi, Sardar S.; Cress, Dean; Dhadialla, Tarlochan S.; Tzertzinis, George; Retnakaran, Arthur
- CS Canadian Forest Service, Saulte St. Marie, ON, P6A 5M7, Can.
- SO Developmental Genetics (New York) (1995), 17(4), 319-30 CODEN: DGNTDW; ISSN: 0192-253X
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- LA English
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- AU Martinez, Alberto [Reprint author]; Sparks, Caroline; Hart, Cliff A.; Thompson, John; Jepson, Ian
- CS Jealott's Hill Research Station, ZENECA Agrochemicals, Bracknell, Berkshire, RG42 6ET, UK
- SO Plant Journal, (July, 1999) Vol. 19, No. 1, pp. 97-106. print. ISSN: 0960-7412.
- DT Article
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 Last Updated on STN: 18 Oct 1999
- L3 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

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- AU Kothapalli, Ravi [Reprint author]; Palli, Subba R.; Ladd, Tim R.; Sohi, Sardar S.; Cress, Dean; Dhadialla, Tarlochan S.; Tzertzinis, George; Retnakaran, Arthur
- CS Canadian Forest Serv., Saulte-St. Marie, Natl. Resources Canada, 1219 Queen St. E., Saulte-St. Marie, ON P6A 5M7, Canada
- SO Developmental Genetics, (1995) Vol. 17, No. 4, pp. 319-330. CODEN: DGNTDW. ISSN: 0192-253X.
- DT Article
- LA English
- ED Entered STN: 27 Mar 1996
 - Last Updated on STN: 27 Mar 1996

=> s "atgcagcagctatatgtggattttttttagccctgccttc?"

L4 0 "ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?"

=> ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC? IS NOT A RECOGNIZED COMMAND The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

L5 0 ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

=> s mqqlyvbffspaf?

L6 0 MQQLYVBFFSPAF?

=> s ?ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

L7 0 ?ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

=> s MKLLSSIEQAC?

L8 0 MKLLSSIEQAC?

=> s ?atgaagctgtcttctatcgaacaagca?

L9 0 ?ATGAAGCTGTCTTCTATCGAACAAGCA?

=> file registry

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.29	55.50
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY -2.08	SESSION -2.08

FILE 'REGISTRY' ENTERED AT 12:26:12 ON 21 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 20 JAN 2004 HIGHEST RN 639777-15-4 DICTIONARY FILE UPDATES: 20 JAN 2004 HIGHEST RN 639777-15-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter <u>HELP PROP</u> at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> s ?atgaagctgtcttctatcgaacaagca?

LEFT TRUNCATION IGNORED FOR '?ATGAAGCTGTCTTCTATCGAACAAGCA?' FOR FILE 'REGISTRY' L10 0 ATGAAGCTGTCTTCTATCGAACAAGCA?

Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may

interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

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=> s MKLLSSIEQAC?
L11
             0 MKLLSSIEQAC?
=> s mqqlyvbffspaf?
            0 MQQLYVBFFSPAF?
=> d his
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     FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 12:11:51 ON 21 JAN 2004
L1
             20 S ECDYSONE (A) RECEPTOR (5A) CHIMERIC
L2
              2 S L1 AND HINGE
L3
              8 S HINGE (S) LIGAND (A) BINDING AND ECDYSONE (A) RECEPTOR
              0 S "ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?"
L4
L5
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              0 S MQQLYVBFFSPAF?
L6
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L8
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L9
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L10
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L11
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0 S MQQLYVBFFSPAF?

L12

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1/21/04